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ABSTRACT

The followup study assessed employment variables among persons who had experienced the Comprehensive Residential Family Career Education Model IV of the Mountain-Plains program. The assessment was accomplished by focusing on the current status of former Mountain-Plains students with regard to work variables: income, satisfaction derived from work, quality of work as perceived by employer, motivation to work, and alienation from work. Twenty-four disadvantaged families were sampled stratified random fashion by completion of status and area of enrollment. For comparative purposes three additional reference groups were identified and tested. The measurement techniques used for testing the variables for each group were: the Job Descriptive Index (JDI), Minnesota Satisfactoriness Scales (MSS), Job Motivation Index (JMI), Work Alienation Scale (WAS), and the Obeisance Scale (OS). The testing procedures and design, and the results for each of the variables tested are briefly discussed. Higher scores were made after the program than on entry on all variables except alienation and obeisance. The document concludes with a general discussion of the findings and a brief explanation of the study's weaknesses. A two-page bibliography is appended. (Author/BP)

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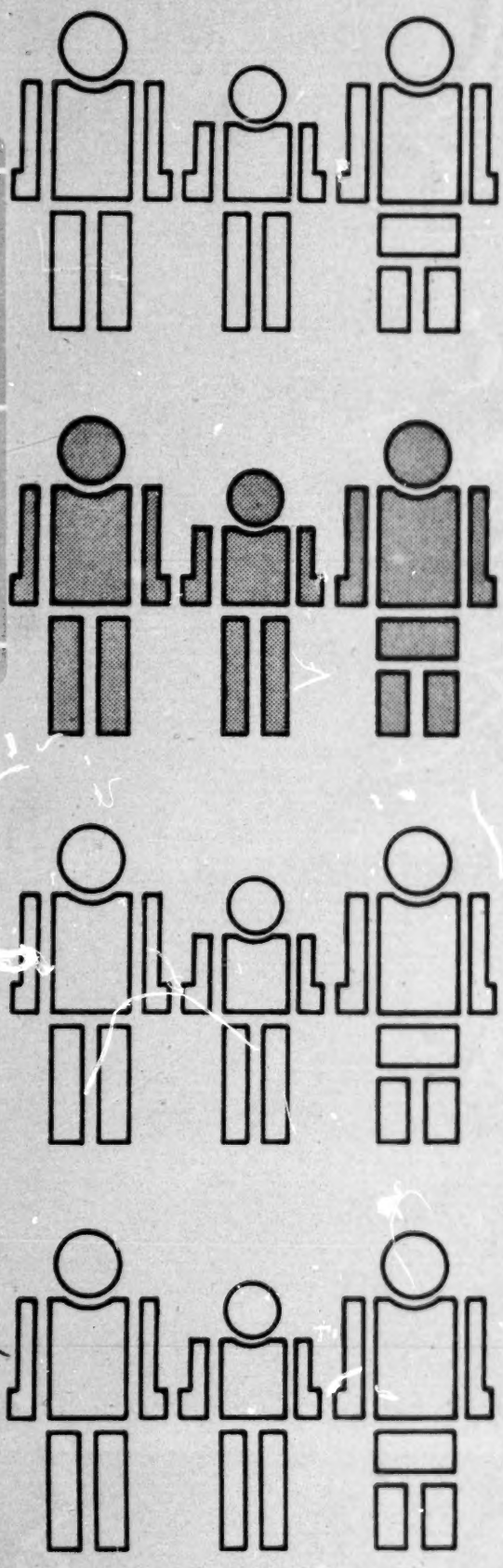

CASE STUDY REPORT # 1

WORK AND INCOME: A Followup Study of Career Education Model IV Students.

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MOUNTAIN PLAINS EDUCATION ECONOMIC DEVELOPMENT PROGRAM INC.

WORK AND INCOME: A FOLLOW-UP STUDY OF CAREER EDUCATION MODEL IV STUDENTS

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WORK AND INCOME: A FOLLOW-UP STUDY OF FORMER STUDENTS OF CAREER EDUCATION MODEL IV

INTRODUCTION

Throughout American history one enduring element (mythology) of social thought has been the national commitment to "equality of opportunity". The meaning of this phrase, however, has not been consistently and universally agreed upon. "Americans", as George McKenna (1974) puts it, "have always understood one another in their major premises. . . even while fighting one another over the contents of the premises". That the vision of "equality of opportunity" has persisted as a major theme in American development, however, cannot be denied. This goal--so illusory and with such a diversity of applications and meanings--often appears as argument both in support of the success of American education as well as an argument criticizing the failures of American education.

Until recently, equality of educational opportunity has meant, in practice, free compulsory public education. In recent years that definition has been in flux until today most agree that the form and content of education are as much an element of its equal availability as is the fact that it is available and free. Ryan (1971) speaks for many in manpower and education when he says it is time to stop "blaming the victim" for any lack of true equality and begin to focus on institutional structures and practices that produce victims.[1] Conrad's (1975) recent essay elaborated this position as it pertains to education, concluding that the culprit in the lack of

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[1]The yearly educational outlay for students exiting formal education without a degree or specific technological skills to enter the labor market has been reported at $28 billion (Goldhammer and Taylor, 1972).

educational success, ". . . is a mass educational practice not attuned to our best current knowledge about either educational practice or the successful adult social and vocational interaction that education supposedly fosters". Failures of the educational system are especially likely to be classified as "disadvantaged".

THE DISADVANTAGED. The defining element in disadvantaged status is income. If an individual is not yielding "products" to society equal to his need for "products" to sustain self and dependents he finds himself at a distinct disadvantage in the struggle for survival. The "product" yielded to society, and with regard to which the disadvantaged are seen to be deficient, is basically the productivity of the individual as an active member of the "labor force". Socially, this productivity represents a contribution to national product which may be emperically defined as the individual's earning ability. (This proposition's validity is contingent on the usual assumptions that market wages are indicative of labor productivity.) Therefore, the individual whose productivity is: (1) insufficient to meet his/her maintenance requirements; (2) less than a consensual potential; (3) based on less than full-time employment; and/or (4) employment in areas whose contributive productivity is viewed as of little value and hence generates little income, is disadvantaged both in ability to contribute to, and to share in, the fruits of the productivity of the system as a whole, and furthermore may weaken the productive capacity of the system by requiring maintenance by society as a whole. Thus, the most salient characteristic of "disadvantaged" is un- or underemployment. Much attention, at best largely unfocused, of late has thus been accorded to the nature of un- or marginal employment (e.g., the war on poverty and all of its correlates). Distilling this plethora of unsystematized information we now know that, apart from certain distinguishing demographic characteristics, disadvantaged persons are likely to display:

1. Low math and formal English language capability.
2. No specific salable vocational skill.
3. A poor self-image.
4. Lack of knowledge about the range of possible employment opportunities.
5. Poor health and buying habits.
6. Alienation from "society".
7. Poor interpersonal skills.
8. Lack of sophistication in World of Work realities (e.g., dealing with employers, promotion/progression mechanisms).

Even students who have completed secondary school often remain at a disadvantage as regards the last seven areas.

IMPROVING SOCIO-ECONOMIC STATUS. The weakness in the nature of current programs to remove the disadvantaging elements within an individual's skill development rests in the fragmentary nature of such programs. Traditional educators focus on #1, Vocational Educators on #2, Social Workers and psychologists/counselors on numbers 3, 5, and 7, the corrections system on #6, and Employment Counselors on #4 (and on rare occasion, #8). Yet one defining reality for the disadvantaged is that the elements in disadvantaged status are MULTIPLE and INTERACTIVE. Problems usually cited, such as malnutrition, indebtedness, psychological disturbance, drug/alcohol abuse, and marital discord, are symptoms of underdeveloped personal/social/technical skills rather than causes in themselves.

Concern with the limitations of current educational delivery systems has produced a number of efforts to impact both disadvantaged status and overall institutional

models and procedures. The most comprehensive of these efforts to date is Mountain-Plains (National Institute for Education, Career Education Model IV).

THE PROBLEM UNDER STUDY. This paper assesses employment variables among persons who experienced a Comprehensive Residential Family Career Education model. This is accomplished by focusing on the current status of former Mountain-Plains students with regard to work variables; particularly income, satisfaction derived from work, quality of work as perceived by employers, motivation to work, and alienation from work.[2]

METHODOLOGY

SUBJECTS. Twenty-four disadvantaged families who had experienced the Mountain-Plains Program were sampled stratified random fashion by completion status (completer-noncompleter), area of enrollment (Mobility and Transportation, Marketing and Tourism, Office Education, Building Trades, Other) and exit period (Fall, 1973 and Spring, 1974). Using program entry and performance records as a guide, families who had moved out of the six state region or who could not be located were replaced intentionally by the most similar family within the original stratification cell as judged by the Mountain-Plains External Evaluation Specialist. In this fashion, eight families (seven completing, one noncompleting) were replaced. Six of the eight had been out of the program over one year, while, two exited some six months previous to sampling.

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[2]Subsequent reports in this series will examine the self-concept, social alienation/integration, general life satisfaction of former students, and will present the detailed case histories from which the generalizations were derived.

indications are that any bias in the sample from replacements will tend to minimize findings as regards positive program effects.[3]

Two families are employed in the pursuit of higher education, and are therefore not included in the analysis. One single head of household has remarried and left the labor force, and therefore is not counted as a separate family in "current income" analysis. The confidence of generalization to all Mountain-Plains participating families over time (about 1,000) from the reduced sample(s) of ten and eleven for family income analysis by exit period is 80%.

All exited sample students currently or recently employed are included in the work/worker variables analysis.

THE REFERENCE GROUPS. For comparative purposes, three reference groups were identified. The first reference group consists of twenty-six families (twenty married couples and six single female heads of household) entering Mountain-Plains in the early winter of 1974-75. Lindquist's (1953) argument would indicate this to be an equivalent control group, all other factors being equal. Other factors were not equal. The state of the economy in the Fall of 1974 had swollen the applicant pool with those not traditionally

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[3]The nature of unfound families--generally completers who have been long absent from the program--would support the hypotheses that: 1) skill and concomitant mobility and/or 2) entropy (the sheer physical difficulty of keeping track of students over a period of time) are the major factors in determining loss from the sample.

unemployed. Lack of experience in applying upper limit selection criteria produced an entering population with more stable work histories, higher incomes, and higher psychological functionality scores than heretofore.[4] Consequently, Lindquist's argument is invalid in this instance and the reference group used for comparison of work alienation and motivation is not equivalent, with bias in the direction of a Type II error. All members of the twenty-six families who had been employed in the past year completed the alienation, motivation, and obeisance scales.

The second reference group consists of twenty-four families who entered Mountain-Plains subsequent to the first, and subsequent to a determination that JDI and MSS comparison data were needed for this project. These families were tested with the JDI at entry.

The third reference group is comprised of twenty-five families who entered the program in March of 1975, or are scheduled to enter soon. MSS results were obtained by field staff in person when possible and otherwise by telephone.

INSTRUMENTS. The Job Descriptive Index (JDI) is a standardized self-report questionnaire measure of five areas of job satisfaction developed by Smith and Colleagues (1969). Scales measure satisfaction with work, pay, promotions, supervision, and co-workers. Scale reliabilities calculated by the split halves method with Spearman-Brown correction are, respectively, .84, .80, .86, .87, and .88. Various validity studies are reported by Smith, et.al. (1969).

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[4]Unpublished Data. Mountain-Plains Research Department.

The Minnesota Satisfactoriness Scales (MSS), developed by the Industrial Relations Center of the University of Minnesota, measure four dimensions of employee satisfactoriness - that is, the extent to which the worker meets job requirements. Scores are derived from responses by the employee's supervisor to twenty-eight statements concerning employee performance relative to others who currently hold (or previously held) the same or similar jobs. Scales measure employer satisfaction as regards performance, conformance, dependability, and personal adjustment, with a composite scale for overall satisfactoriness. Gibson, et.al., (1970) reported Hoyt reliability coefficients ranging 0.69 to 0.95 for the scales with a median of 0.87. The authors also offer some validity evidence; principally that among satisfied workers, significantly more workers scoring low on satisfactoriness scales leave the job on which they were rated.

The Job Motivation Index (JMI), developed by Patchen (1965) at the University of Michigan Institute for Social Research, measures aroused motivation on the job from the standpoint of devotion of energy to job tasks. Reliability of the scale, established through test/retest, is 0.80. Validity evidence includes significant correlations with: (1) supervisor ratings of concern with quality, (2) production volume, and (3) employee satisfaction.

The Work Alienation Scale (WAS) is a questionnaire measure of subjectively perceived powerlessness within the working environment that was used by Pearlin (1962) specifically for the study of nursing personnel in a large mental hospital. A reproducibility coefficient of 0.91 was reported for the

items. Validity evidence includes significant difference in alienation by method of being assigned tasks (told, asked, explained).

The Obeisance Scale (OS) is a measure of status obeisance- the extent to which authority is valued for its own sake and an ingratiating attitude displayed toward superiors. Pearlin (1962) and Pearlin and Rosenberg (1962) report a reproducibility coefficient of 0.90 and offer considerable validity evidence for the scale; particularly the ability of the scale to differentiate extent of work alienation by supervisory style. The authors categorize scores of zero or one as "low obeisance", a score of two as "moderate obeisance", and a score of three or four as "high obeisance".

PROCEDURES. Subjects were listed by state of current residence. States were then grouped to provide approximately equal sample populations to each of the investigators. Mountain-Plains state offices ascertained the availability of sampled students to participate in the study and, on that basis, scheduled interviews. All students contacted were offered a $40 honorarium and agreed to participate in the special study. To reduce travel expense, two families were grouped with those in adjacent states. The groups by state were then assigned randomly to the External Evaluation and Affective Evaluation Specialists for interviews.[5] Interviews were conducted in the homes of the exited students between mid-November, 1974 and mid-January, 1975. Interviews required about eight hours for two-parent families, spread over two evenings.

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[5]Both interviewers were experienced researchers who hold advanced degrees in the Social Science area.

Typically, the interview entailed the interviewer taking the interviewee family to dinner as an initial step in establishing rapport. Following dinner, the standardized instruments were administered in the student's homes; including the JDI, WMI, WAS, and OS. Other interview topics for the initial session included gathering work and income histories, and soliciting employer information, including permission to interview the employer the following day. All students agreed to the employer interview as did all current employers. The MSS was administered at the beginning of the employer interviews.

DESIGN. The overall design is reported in Coyle, Conrad, and Myers (1974). Specific designs for the data reported herein are: (1) A Pretest/Post Test One Group Study for income analysis, (2) Both a Static Group Comparison and a Non-Equivalent Control Group Design for satisfaction and satisfactoriness measures, and (3) A Non-Equivalent Control Group Design for the analysis of motivation, alienation, and obeisance. Where independence of groups was marginal, the appropriate "t" tests were applied. Where mean differences are an appreciable fraction of the standard deviation (1/2 or more) no tests of independence are reported.

RESULTS

EMPLOYMENT. At Entry, 42% of the heads of household and 29% of the spouses were employed. Current full time employment has increased to 78% for head of household and has held constant at 30% for spouses. (See Table 1.)

INCOME. Average family income had increased $3,400 for families who had been out of the program for over one year, and $2,600 for families departing

Mountain-Plains six months prior to the study. (See Table 2.) This compares with a $1,300 projected increase in annual income computed from all heads of household starting salaries immediately after exit (Coyle, 1975). An estimated slope for the family income gain curve (pre/post program income gain per month/months out of the program) is 15 ($180 gain per month). (See Figure 1.) The predication equation for income is: Y=($180 per month) x (months out of program) + ($4,245).[6] Due to the variation in income data source for the points in Figure 1, this result should be viewed as a preliminary approximation.

SATISFACTION. Departed males rank at or above the instrument (JDI) norm on all satisfaction variables. Departed males score higher than entering male students on satisfaction with work and supervision. (See Table 3).

Departed females rank above 'norm' on pay and promotions and below on work, supervision, and co-workers. A significant difference is noted in favor of departed female students (versus entering female students) on pay and promotions. Females report less satisfaction with housework than employed women report with their jobs, ranking at the 30th percentile versus female employment norms. (See Table 4.)

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[6]Preliminatry data reported by Coyle, Seninger, and Blair (1974) shows a slope of 3 for the monthly income gain curve of a fully equivalent control group.

SATISFACTORINESS. Employed males are ranked above the instrument (MSS) norm on all dimensions of employee satisfactoriness except dependability. Departed males score significantly higher than entering males on performance, conformance, and overall satisfactoriness. (See Table 5.)

Employed females who have departed rank above norm on conformance, dependability, and personal adjustment, but below norm on performance. They also score significantly above entering females on conformance, but below on performance. (See Table 6.)

MOTIVATION. Male and female subjects do not differ on motivation (JMI) or alienation (WAS) in either entering or departed student groups. Departed students score significantly above entering students on job motivation. (See Table 7.)

ALIENATION. Both entering and departed students score below Pearlin's (1962) group (mean=1.87), indicating low work alienation. Score differences between entering and departed students are not statistically independent. (See Table 8.)

OBEISANCE. Both entering and departed students score as moderate to low on obeisance (OS) as categorized by Pearlin. Score differences between these two groups do not demonstrate statistical independence. (See Table 9.)

Table 1

Family Employment Status

	N	%	% Corrected for Availability for Employment	Employed at Entry N	Employed at Entry %
Head of Household				10	42%
Employed	18	75%	78%		
Job	(16)	(67%)	(69%)		
In School	(2)	(8%)	(9%)		
Unemployed	5	21%	22%		
Other*	1	4%	---		
Spouse				7	29%
Employed	9	37%	45%		
Full Time	6	(25%)	(30%)		
Part Time	3	(12%)	(15%)		
Unemployed	11	46%	55%		
Other**	4	17%	---		

* One single head of household had remarried and left the labor market to devote full attention to her new home.

** One head of household had divorced following the program and subsequently remarried one of the single heads of household who also happened to be in the sample. Other single heads of household in the sample obviously do not have a spouse. (The current whereabouts of the divorced spouse in the first instance and her status are not known.)

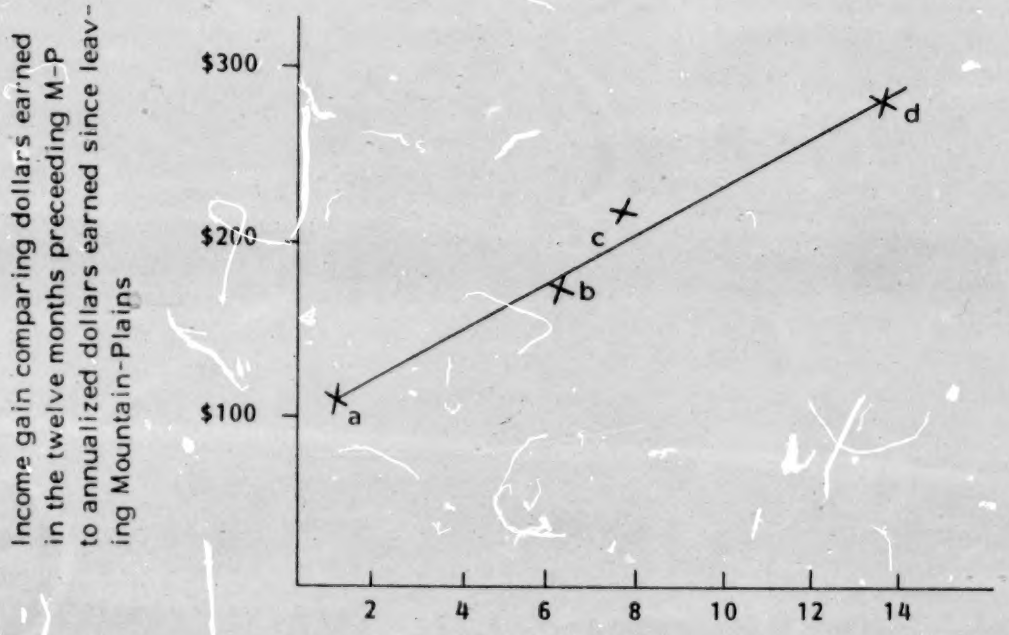
Table 2

Income

	Income Earned 12 Months Preceeding Program		Annualized Income Since Leaving MP (Avg. 10 Mo.)		Gain	Gain
	Mean	S. D.	Mean	S. D.	Mean	S. D.
Exited Fall, 1973 n = 10 Families	2,697	2,022	6,100	3,800	3,403*	3,679
Exited Spring, 1974 n = 11 Families	5,653	3,017	8,274	4,085	2,621*	3,096
Total Sample N = 21	4,245	2,936	7,239	4,010	2,994*	3,324

* As the gains are, in all cases, more than 1/2 standard deviation, tests of statistical independence were not performed.

NOTE: Incomes are reported in raw dollars. Constant dollar corrections would decrease the magnitude but not the nature of the results.



a. Computed on the salary of the head of household only three weeks post exit. Completing students only.

b. Family income based on projection of current employments for both the head of household and spouse six months post exit. Completing students only.

c. Family income an average of seven months post exit. Based on actual dollars earned since exit and includes both completers and noncompleters with at least four weeks in program.

d. Family income as per c, but at 13+ months post program.

NOTE: c and d are derived from samples; a and b from the population.

Figure 1

Income Trends of Former Students

Table 3

Worker Satisfaction, Male Students

	Departed Men				Entering Men				
	n**	Mean	Percentile Rank vs. Norm (JDI)		n	Mean	Percentile Rank vs. Norm (JDI)		t
Work	18	37.8	(SD=9.03)	50	22	30.7	(SD=13.3)	30	1.93*
Pay	17	16.1	(SD=4.95)	55	22	14.6	(SD=10.3)	48	0.55
Promotions	17	17.2	(SD=7.31)	75	22	12.7	(SD=12.0)	63	1.36
Supervision	17	45.7	(SD=5.93)	62	22	37.1	(SD=13.2)	30	2.49*
Co-Workers	17	42.1	(SD=13.1)	35	22	36.2	(SD=14.4)	20	1.32

NOTE: Generalization confidence for men = 83%.

*Statistically significant, t test for independent samples, $p \leq 0.05$.

**One male is self-employed and felt that only the work scale was relevant.

Table 4

Worker Satisfaction, Female Students

	Departed Women				Entering Women[1]				
	n**	Mean	Percentile Rank vs. Norm (JDI)		n	Mean	Percentile Rank vs. Norm (JDI)		t
Work	8	33.9	(SD=11.5)	40	13	28.4	(SD=12.4)	23	1.01
Pay	8	17.1	(SD=6.06)	65	13	11.5	(SD=7.09)	40	1.85*
Promotions	7	17.6	(SD=7.21)	83	13	9.54	(SD=6.85)	67	2.47*
Supervision	8	41.4	(SD=14.0)	40	13	42.3	(SD=12.4)	50	-0.15
Co-Workers	8	43.1	(SD=16.9)	38	13	37.8	(SD=13.7)	30	0.79
Housework	20	29.8	(SD=8.96)	30	13	----	----	---	---

NOTE: Generalization confidence for women's employment = 77%, and for women's housework - 84%.

*Statistically significant, t test for independent samples, $p \leq 0.05$.

**One woman employed only part time did not feel she could complete the JDI; another felt the promotion scale to be inappropriate.

[1]Women's generalization confidence levels for employment are based on the assumption that all women are potentially in the employed population.

Table 5

Employee Satisfactoriness, Male Students

	Departed Men			Entering Men			
	n*	Mean	Percentile Rank vs. Norm (MSS)	n	Mean	Percentile Rank vs. Norm (MSS)	t
Performance	17	22.7	(SD=4.55) 58	22	18.864	(SD=4.813) 35	2.548*
Conformance	17	17.0	(SD=2.94) 70	22	15.909	(SD=2.977) 60	1.965*
Dependability	17	9.76	(SD=2.19) 40	22	9.091	(SD=2.348) 40	1.378
Personal Adj.	17	16.5	(SD=3.43) 55	22	15.591	(SD=2.788) 45	1.586
Overall	17	68.5	(SD=12.9) 59	22	61.273	(SD=10.977) 35	6.444*

Note: Generalization confidence for men = 83%.
*Statistically significant, $p \leq 0.05$, t test for independent samples.

Table 6

Employee Satisfactoriness, Female Students

	Departed Women			Entering Women[1]			
	n*	Mean	Percentile Rank vs. Norm (MSS)	n	Mean	Percentile Rank vs. Norm (MSS)	t
Performance	6	19.17	(SD=2.71) 35	6	21.667	(SD=4.457) 53	- 2.285*
Conformance	6	16.17	(SD=3.60) 60	6	12.333	(SD=1.505) 8	4.160*
Dependability	6	10.33	(SD=1.97 55	6	9.833	(SD=2.401) 55	.582
Personal Adj.	6	16.83	(SD=2.32) 60	6	18.167	(SD=3.656) 70	- 1.340
Overall	6	64.67	(SD=9.89) 47	6	67.333	(SD=12.879) 55	1.367

Note: Generalization confidence for women employed = 76%.
Due to the extremely small n's these results should be viewed as strictly exploratory.
*Statistically significant, $p \leq 0.05$, t test for independent samples.

[1]Women's confidence levels for employment are based on the assumption that all women are potentially in the employed population.

Table 7

Work Motivation

Measured an Average of Ten Months Post-Departure

	Group	n	Mean	S.D.	t
1,	Departed Female Students	8	14.8	2.38	
2,	Departed Male Students	17	14.7	2.09	
3,	Departed Male + Female Students	25	14.7	2.13	
4,	Entering Female Students	22	13.6	2.61	
5,	Entering Male Students	19	13.5	3.27	
6,	Entering Male + Female Students	41	13.5	2.90	
	Group 3 vs. Group 6, One tail t test for independent samples				1.76*

* Statistically Significant, $p \leq 0.05$.

NOTE: Comparisons by sex are not made as neither the departing students nor the entering students show any mean difference by sex.

Table 8

Work Alienation

Measured an Average of Ten Months Post-Departure

	Group	n	Mean	S.D.	t
1,	Departed Female Students	8	0.875	1.16	
2,	Departed Male Students	17	1.06	0.748	
3,	Departed Male + Female Students	25	1.00	0.866	
4,	Entering Female Students	23	0.783	0.871	
5,	Entering Male Students	18	0.778	1.11	
6,	Entering Male + Female Students	41	0.781	0.962	
	Group 3 vs. Group 6, t test for independent samples				0.931

Table 9

Obeisance

	Group	N	Mean	S.D.	t
1,	Departed Females	9	2.00	0.866	
2,	Departed Males	18	1.67	1.085	
3,	Departed Males + Females	27	1.78	1.013	
4,	Entering Females	23	1.48	1.201	
5,	Entering Males	17	1.53	1.281	
6,	Entering Males + Females	40	1.50	1.220	
	Group 3 vs. Group 6				0.802

NOTE: If subjected to a "two group only" analysis, departed females score significantly higher than entering females (t = 2.8).

DISCUSSION

INCOME AND EMPLOYMENT. Overall results are encouraging. Employment rate has doubled. Income is seen to increase not only at exit, but in an essentially linear fashion for the first year out of program. At the level of income registered one year post exit, income increase pays back operational program costs in under four years. (See Coyle (1975), and Coyle, Seninger, and Blair (1974), for a discussion of cost/benefit analysis of Mountain-Plains.) Similarly, the average family increase in income of $180 per month over the first year out of program compares with the average gain of about $55 per month,[7] for a fully equivalent control group.

SATISFACTION, SATISFACTORINESS AND OBEISANCE. At entry, Mountain-Plains students report a low satisfaction with previous employments and are generally rated as unsatisfactory by employers. So salient were these characteristics, that Mountain-Plains did not formally document their levels. Personal and Career Counselors have reported strong student complaints about previous employers/employment situations. Field staff contend that the main problems experienced by students in their former employments are an inability to conform to job requirements, a high degree of employer and co-worker conflicts, and poor reliability. As a consequence, the high (62nd percentile) ranking of satisfaction with supervisors, and the high ranking of conformance by employers (70th percentile) for male heads of household is seen as an especially potent finding--as is the rating (55th

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[7] Reflected in Myers' (1974) preliminary data from a fully equivalent control group pre/post measured over an 18 month period.

percentile) on personal adjustment. The status obeisance findings indicate that conformance behaviors do not result from repressive personality changes of a type that insure "blind obedience" to authority.

The rating given to housework should raise serious doubts for any who might argue that disadvantaged women have a special love for home care tasks, as opposed to outside employment. (Neither does the rating of "employed" work indicate any special affinity for the secretarial tasks which comprised the employment of all but one of the females.)

The fact that entering and departed males do not differ on satisfaction with pay is surprising. One can only speculate that the newly acquired education and sophistication in career progression has increased the hopes and expectations of students for higher income while the inflation rate has decreased buying power.[8]

The co-worker rating is puzzling as well, especially in light of research data that shows increasing psychological development and interpersonal skill during program participation.[9] One may speculate that former students, with their new skills and increased sophistication, now aspire more to and identify more with the supervisor position, than with fellow entry level co-workers. This tends to be supported by the high rating of satisfaction with supervisors.

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[8]One student reported that his biggest "downer" was realizing that he had twice as much money as he'd ever had in his life, but between taxes and prices he couldn't really buy any more with it--that one of his fondest dreams, owning his own home, still seemed totally out of reach.

[9]See Schwager and Conrad (1974), and Mayotte and Conrad (1974).

Additionally, the importance of the supervisor in job retention is now an accepted fact. Unable to influence "supervisors in general" Mountain-Plains has focused heavily on providing student skills for dealing with supervisors, and interpersonal skills in general. This too may be a root of the high supervisor ratings.

MOTIVATION AND ALIENATION. The stronger motivation showing for departed versus entering students is an encouraging finding. However, scores for both groups indicating low work alienation were not expected;[10] particularly for entering students. The "below norm" ratings of both groups may stem from the fact that the scale, "normed" on hospital personnel, may be perceived differently by Mountain-Plains students, none of whom were employed in health professions, and few of whom are employed in such large scale organizations as a city hospital. Milieu changes since Perlin's (1962) study may also contribute. The direction of non-equivalence of the control group, as previously explained, may also contribute to the unexpected direction of the results between groups.

STUDY DEFICIENCIES. Major weaknesses in the study include: (1) lack of specific pre-program information on satisfaction and satisfactoriness, and

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[10]This result would not support the views of those who claim the unemployed dislike work. Rather it may support the contention that the unemployed lack the technical skills, personal skills, opportunity, and sophistication needed for employment. The results do raise questions, however, concerning the often attributed characteristic of alienation as a major constituient of "disadvantaged" status, at least insofar as work is concerned. At present, Mountain-Plains will consider the scores as subjectively anomalous and requiring further investigation.

(2) the low (80%) confidence of generalization inherent in the use of a small sample.[11] However, increasing the sample size to the level required for 95% confidence would have trebled the sample size and thereby resources required for executing the study.[12] Such additional resources were not available. Finally, since the Mountain-Plains population was recruited with emphasis on low work satisfaction and satisfactoriness, and with the majority of heads of household unemployed, formal documentation of these levels seemed unnecessary.

The necessity of replacing 25% of the sampled families also was an early source of concern. However, as noted on page 5, analysis of the families which could not be found indicated that sampling concerns with regard to replacement might most appropriately focus on cautions regarding Type II error in assessing program effect.

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[11]It should be noted that in the areas where case study data is directly comparable to data gathered on exited students through on-going survey analysis, the direction of pre/post change reported in the case studies is supported by the survey data. Therefore, the confidence of interpretation with regard to certain variables discussed in the report is likely greater, in actuality, than the 80% formal generalization confidence reported.

[12]Meyer (1974) contends that "...many educational researchers have a relatively low sampling cost to a point where the cost of even one more observation rises quite steeply. I would conjecture that in those cases the optimal sample size is just before that point." Although costs in the current case are essentially linear, there was a rather clear point at which the resources available and costs of increasing sample size intersected.

GENERAL OBSERVATION

Willingness, even eagerness, on the part of families interviewed to speak freely was as striking as the numerical results. Quite apart from the payment, students were enthusiastic and excited about talking with someone "from the school", and in fact, showed the usual "alumni" interest in changes, and the whereabouts of old classmates. Interviewers observed that former students retain a strong and positive sense of institutional identity.

FORMATIVE IMPLICATIONS

Implications derived from the income and work performance/satisfaction data are, overall, very positive. Mountain-Plains students are seen to be more favorably perceived by their employers than the average worker on most variables. However, overall work on dependability in World of Work and in the institution generally would seem to be called for. Likewise, the low (35th percentile) ranking of female worker performance would seem to require attention as all but one of the women are products of the same occupational area.

REFERENCES CITED

Conrad, R.W. "Rebuilding the Educational Engine." National Model IV, 1975, 2 (2), p. 5.

Coyle, D.A. Selected Program Indicators. Paper presented at the Board of Directors meeting, Mountain-Plains Education and Economic Development Program, Inc., Glasgow, Montana, March 1, 1975.

Coyle, D.A., Conrad, R.W., and Myers, D.D. In-Depth Case Study of Exited Families: A Summary of the Research Design for Phase I Preliminary Effects Study. Glasgow, MT: Mountain-Plains Press, November, 1974.

Gibson, D.L., Weiss, D.J., Dawis, R.V., and Lofquist, L.H. Manual for the Minnesota Satisfactoriness Scales. Industrial Relations Center, University of Minnesota, December, 1970.

Goldhammer, K., and Taylor, R.E. Career Education Perspective and Promise. Columbus, OH: Charles E. Merrill, 1972.

Lindquist, E.F. Design and Analysis of Experiments in Psychology and Education. Boston: Houton-Mifflin, 1953.

Mayotte, A.C., and Conrad, R.W. Effects of a Group Counseling Model on Self-Concept and Related Variables With Adult Members of Disadvantaged Families. (Counseling Services Report No. 20.) Glasgow, Montana: Mountain-Plains Press, September, 1974. (ERIC CE 003 083)

McKenna, G. American Populism. New York: G.P. Putnam's Sons, 1974.

Meyer, D.L. "Statistical Tests and Measured of Power: A Critique." American Educational Research Journal, Spring, 1974, 11 (2), 179-88.

Myers, D.D. Selected Pre-Center Characteristics Compared to Six-Month Characteristics for Control, Completers and Non-Completers. Glasgow, Montana: Mountain-Plains Press, March, 1974.

Patchen, M. Some Questionnaire Measures of Employee Motivation and Morale. Ann Arbor, MI: Institute for Social Research, The University of Michigan, 1965.

Pearlin, L.I. "Alienation From Work: A Study of Nursing Personnel." American Sociological Review, 1962, 27, 314-26.

Pearlin, L.I. and Rosenberg, M. "Nurse-Patient Social Distance and the Structural Context of a Mental Hospital." American Sociological Review, 1962, 27, 56-65.

Ryan, W. Blaming the Victim. New York: Pantheon Books, 1970.

Schwager, H.A., and Conrad, R.W. Impact of Group Counseling on Self and Other Acceptance and Persistence With Rural Disadvantaged Student Families. (Counseling Services Report No. 15.) Glasgow, Montana: Mountain-Plains Press, June, 1974. (ERIC CE 003 084)

Seninger, S., Blair, L., and Coyle, D.A. "Report of Benefit-Cost Analysis of the Mountain-Plains Program." Proposal, FY75 - FY76 Career Education Model IV, Volume I. Glasgow, Montana: Mountain-Plains Press, July 1, 1974.

Smith, P.C., Kendal, L.M., and Hulin, C.L. The Measurement of Satisfaction in Work and Retirement. Chicago: Rand-McNalley, 1969.